

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Previously presented) An isolated nucleic acid encoding a polypeptide comprising a subunit of a cation channel, the polypeptide:

(i) forming, with at least one cyclic nucleotide gated cation channel (CNG) alpha subunit, a cation channel having the characteristic of cyclic nucleotide-gating; and

(ii) comprising an amino acid sequence of SEQ ID NO:1.

2. (Canceled)

~~2~~ ~~8~~. (Previously presented) The nucleic acid of claim 1, wherein the nucleic acid comprises a nucleotide sequence of SEQ ID NO:2 or SEQ ID NO:3.

4-7. (Canceled)

~~3~~ ~~8~~. (Previously presented) An isolated nucleic acid encoding a cyclic nucleotide gated cation channel (CNG) 2B polypeptide, the nucleic acid comprising a nucleotide sequence of SEQ ID NO:2 or SEQ ID NO:3, or encoding a polypeptide comprising an amino acid sequence of SEQ ID NO:1.

9-18. (Canceled)

~~4~~ ~~19~~. (Previously presented) An expression vector comprising the nucleic acid of claim 1.

20. (Original) A host cell transfected with the vector of claim 19.

21-40. (Canceled)

**EXAMINER'S AMENDMENT/COMMENT****Examiner's Amendment**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Annette S. Parent on March 2, 2005.

Claim 20 has been amended to read as follows:

5 ~~20~~. An isolated host cell transfected with the vector of claim <sup>4</sup>~~10~~.

Applicants are also advised that the title has been changed by informal Examiner's amendment to more accurately reflect the claimed invention. The title now reads:

"Human cyclic nucleotide-gated channel polypeptide".

**Conclusion**

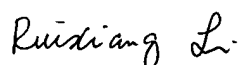
Claims 1, 3, 8, 19, and 20 are allowed. Claims 1, 3, 8, 19, and 20 are renumbered as claims 1-5, respectively.

Art Unit: 1646

**Advisory Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruixiang Li whose telephone number is (571) 272-0875. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa, can be reached on (571) 272-0829. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, please contact the Electronic Business Center (EBC) at the toll-free phone number 866-217-9197.



Ruixiang Li, Ph.D.

Examiner

March 4, 2005